

Fig. 1a

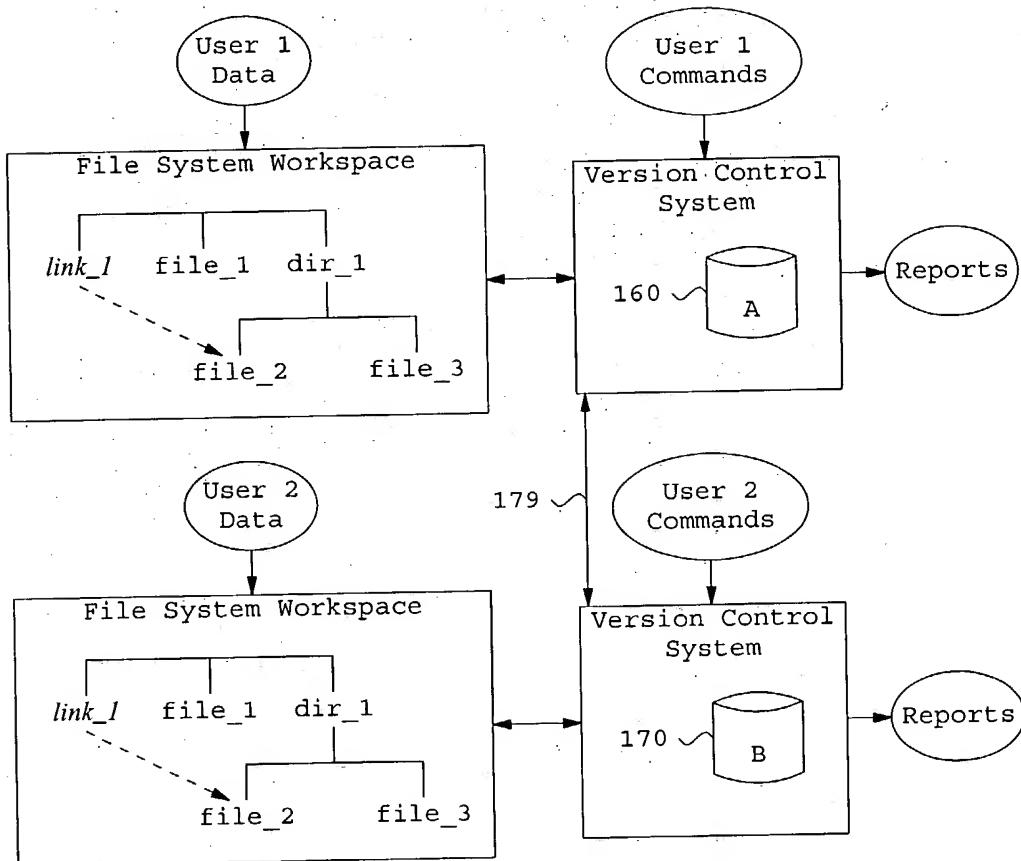


Fig. 1b

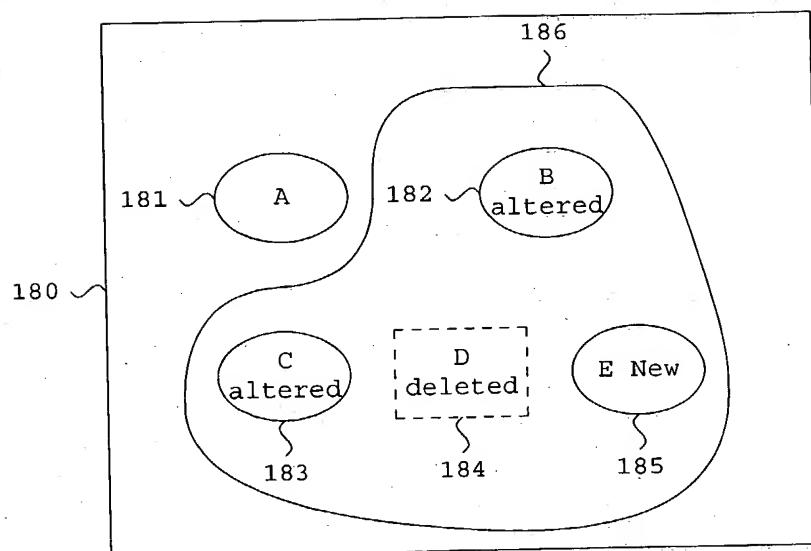


Fig. 1c

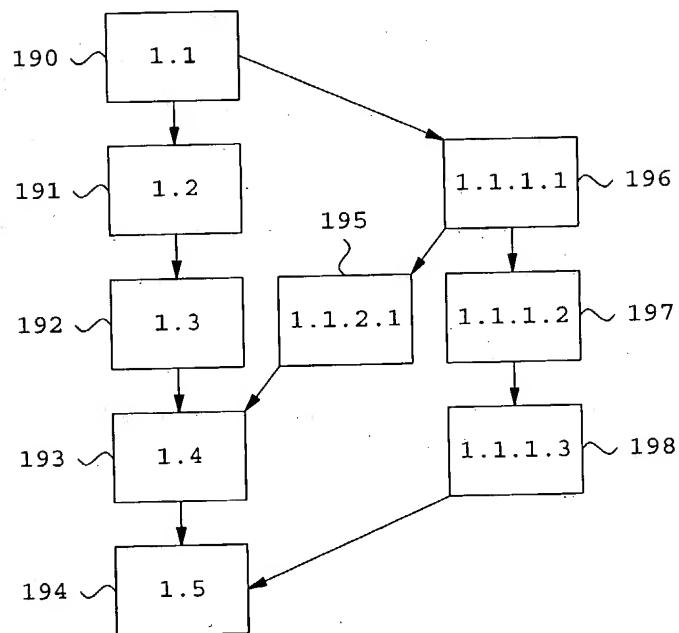


Fig. 1d

KEY	VALUE
NAME	Bob
ADDRESS	123 Elm St. Anytown, ZZ
NOTES	@Here is a line that begins with '@'
PHONE	(999) 999-9999
PIC	<low resolution jpeg of Bob>

Fig. 2a

Operation	Description
ADD	Create a new key with some value
REMOVE	Delete a key and its value
MODIFY	Alter the value for a specified key
QUERY	Return the value for a specified key

Fig. 2b

KEY	VALUE
NAME	Bob
ADDRESS	123 Elm St. Anytown, ZZ
NOTES	@Here is a line that begins with '@'
PHONE	(999) 999-9999
@PIC	<low resolution jpeg of Bob>

Diagram illustrating the mapping between the structured data in the table and the raw binary data in the file:

- The table row for ADDRESS (value: 123 Elm St. Anytown, ZZ) corresponds to offset 300 in the file.
- The table row for NOTES (value: @Here is a line that begins with '@') corresponds to offset 304 in the file.
- The table row for PHONE (value: (999) 999-9999) corresponds to offset 306 in the file.
- The table row for @PIC (value: <low resolution jpeg of Bob>) corresponds to offset 320 in the file.
- The table row for NAME (value: Bob) corresponds to offset 322 in the file.
- The table row for @NAME (value: Bob) corresponds to offset 324 in the file.
- The table row for @NOTES (value: @@Here is a line that begins with '@') corresponds to offset 326 in the file.
- The table row for @PHONE (value: (999) 999-9999) corresponds to offset 328 in the file.
- The table row for @\@PIC base64 (value: long base64 string) corresponds to offset 330 in the file.
- The table row for <End of File> corresponds to offset 833 in the file.

Fig. 3

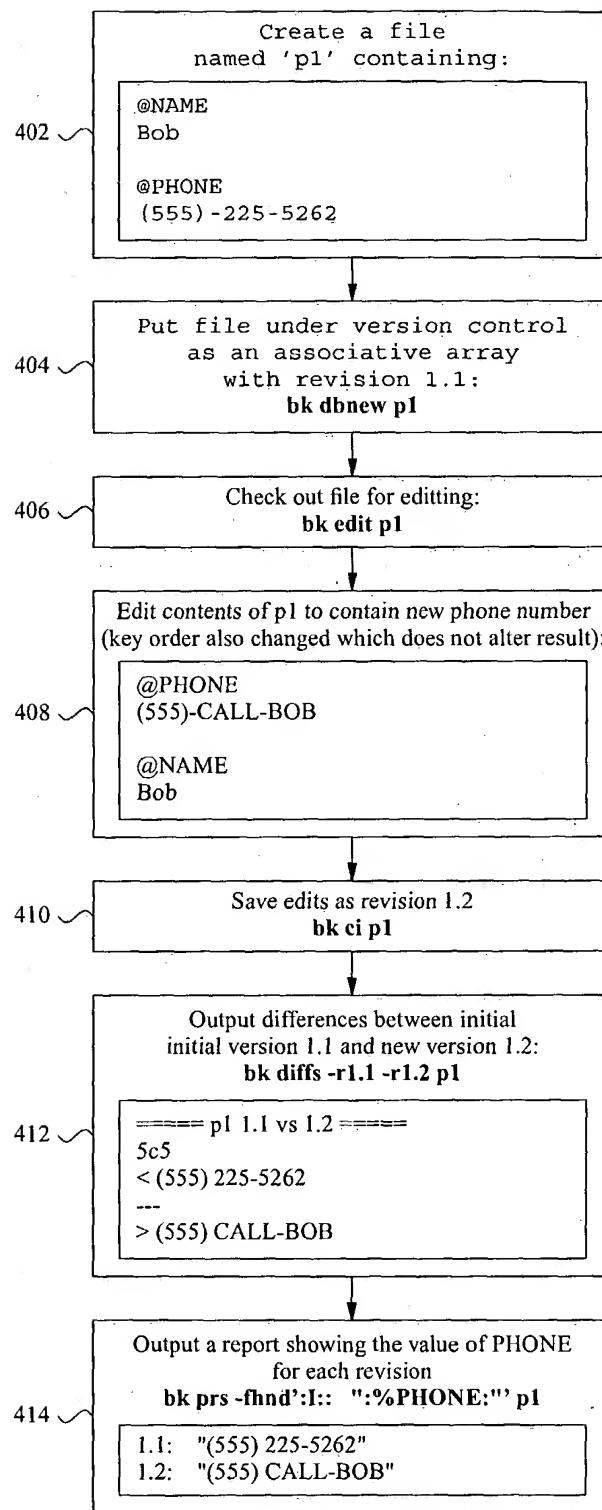


Fig. 4

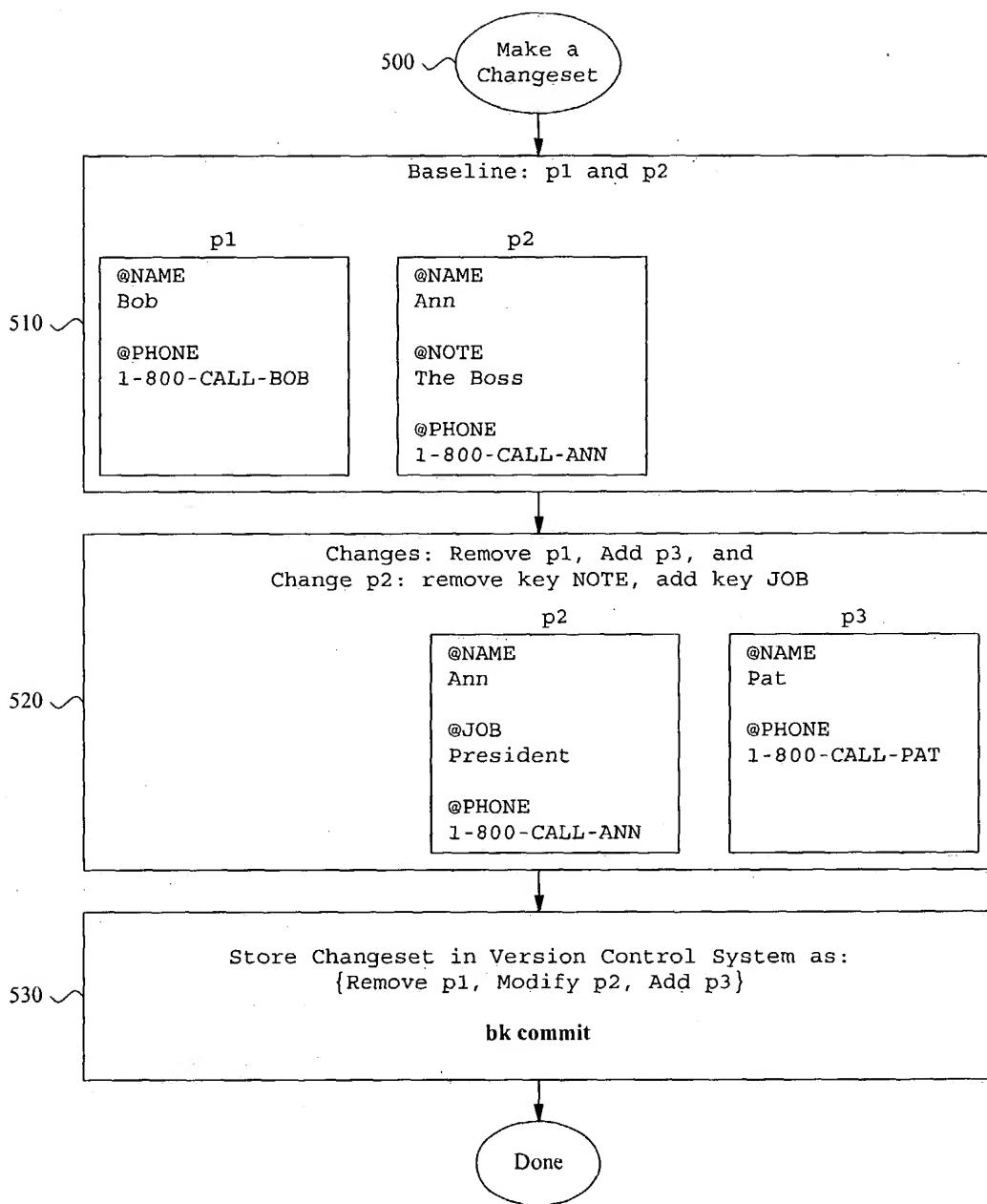


Fig. 5

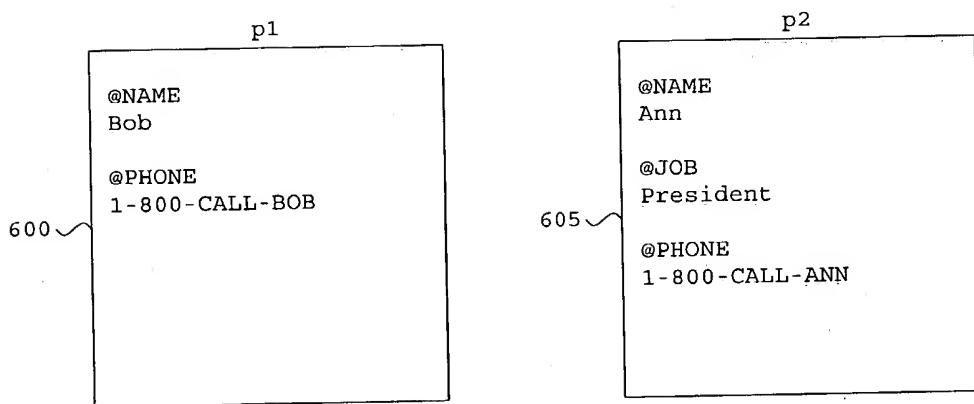


Fig. 6a

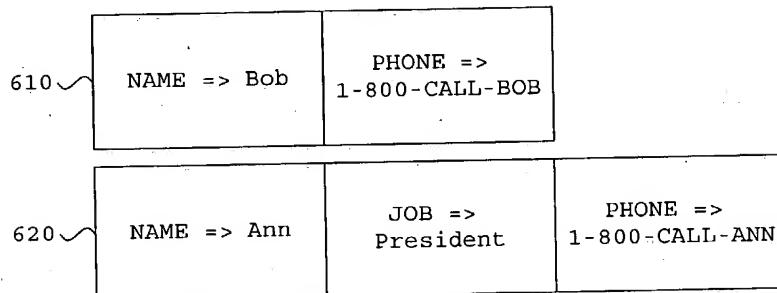


Fig. 6b

630 ↵	NAME 632	JOB 634	PHONE 636
640 ↵	Bob	<empty> 644	1-800-CALL-BOB
650 ↵	Ann	President	1-800-CALL-ANN

Fig. 6c

Spec File

001	@db/conf tablename
002	people
003	@db/mail/to
004	nobody
005	@db/field/default/JOB
006	Staff

Fig. 6d

	NAME	JOB	PHONE
665 ~			
670 ~	Bob	Staff 667	1-800-CALL-BOB
675 ~	Ann	President	1-800-CALL-ANN

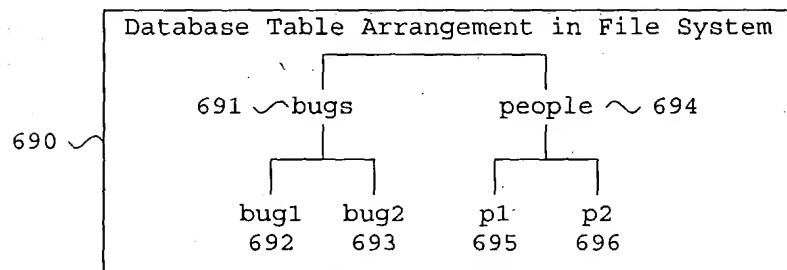
Fig. 6e

bug1	bug2
@OWNER Bob	@OWNER Bob
@SEVERITY 1	@SEVERITY 5
@DESCRIPTION Input 4 fails	@DESCRIPTION Misspelled warning

Fig. 6f

OWNER	SEVERITY	DESCRIPTION
Bob	1	Input 4 fails
Bob	5	Misspelled warning

Fig. 6g



Get phone numbers for people with bugs of severity 1:

```

[01] WHO='bk query -s"select OWNER from bugs where SEVERITY = 1" '
[02] echo $WHO
[03] bk query -s"select PHONE from people where NAME = '$WHO' "

```

```

[04] Bob
[05] 1-800-CALL-BOB

```

Fig. 6h

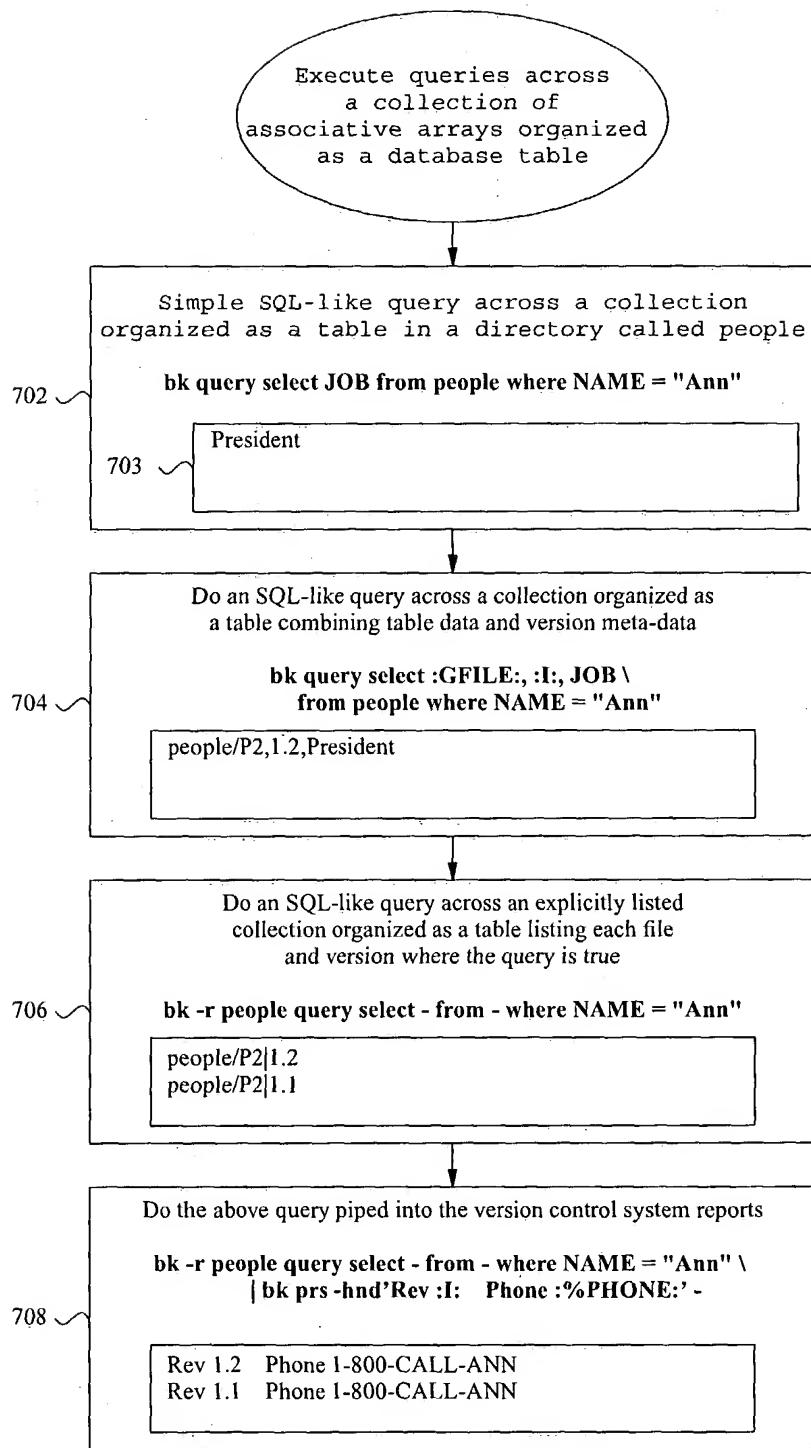


Fig. 7

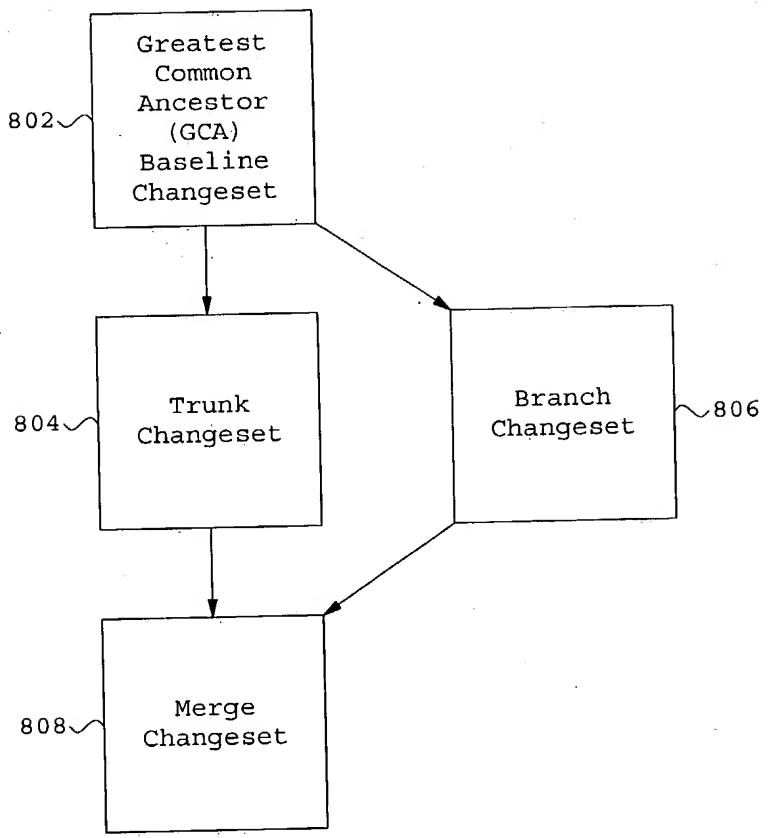


Fig. 8a

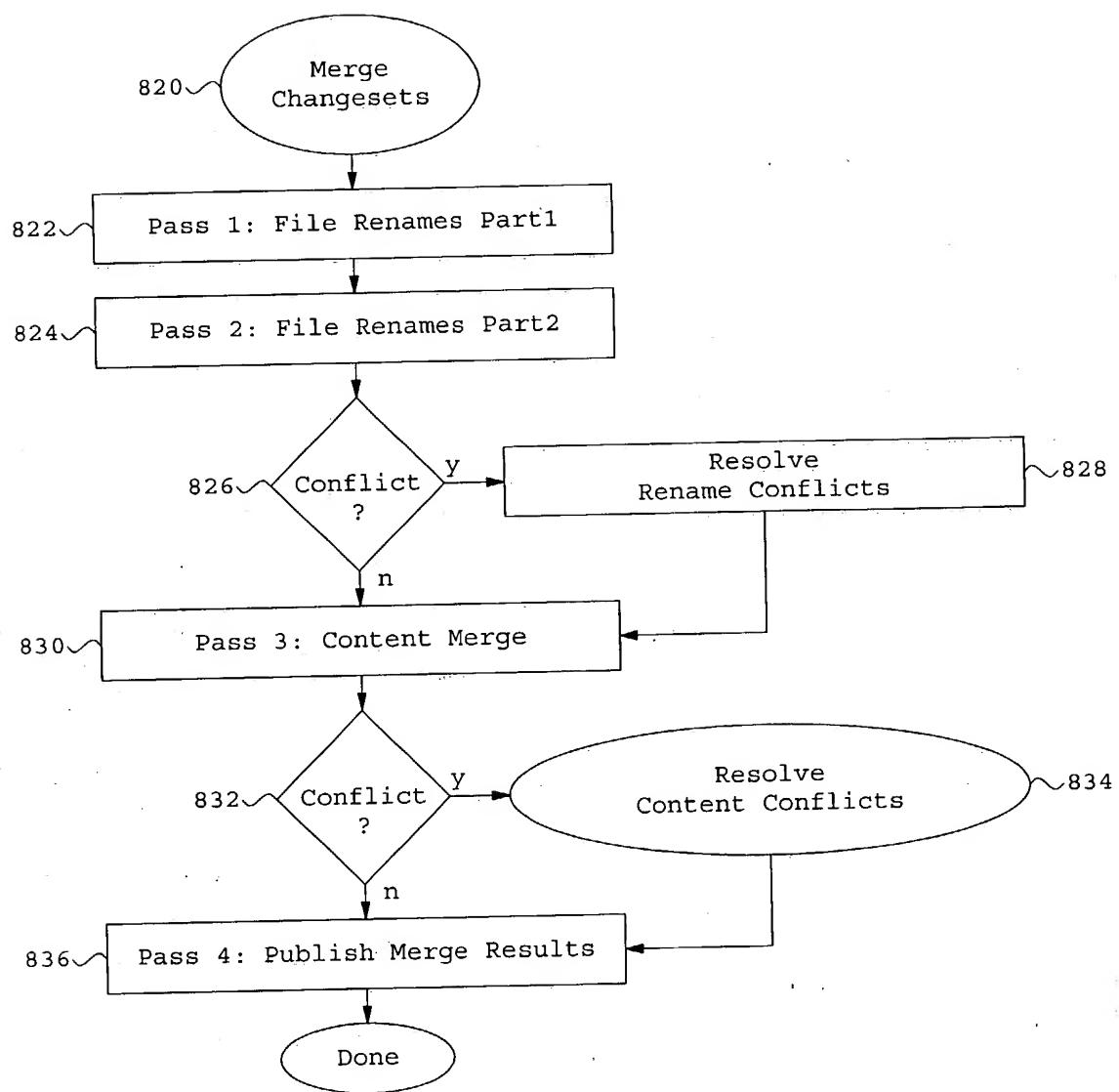


Fig. 8b

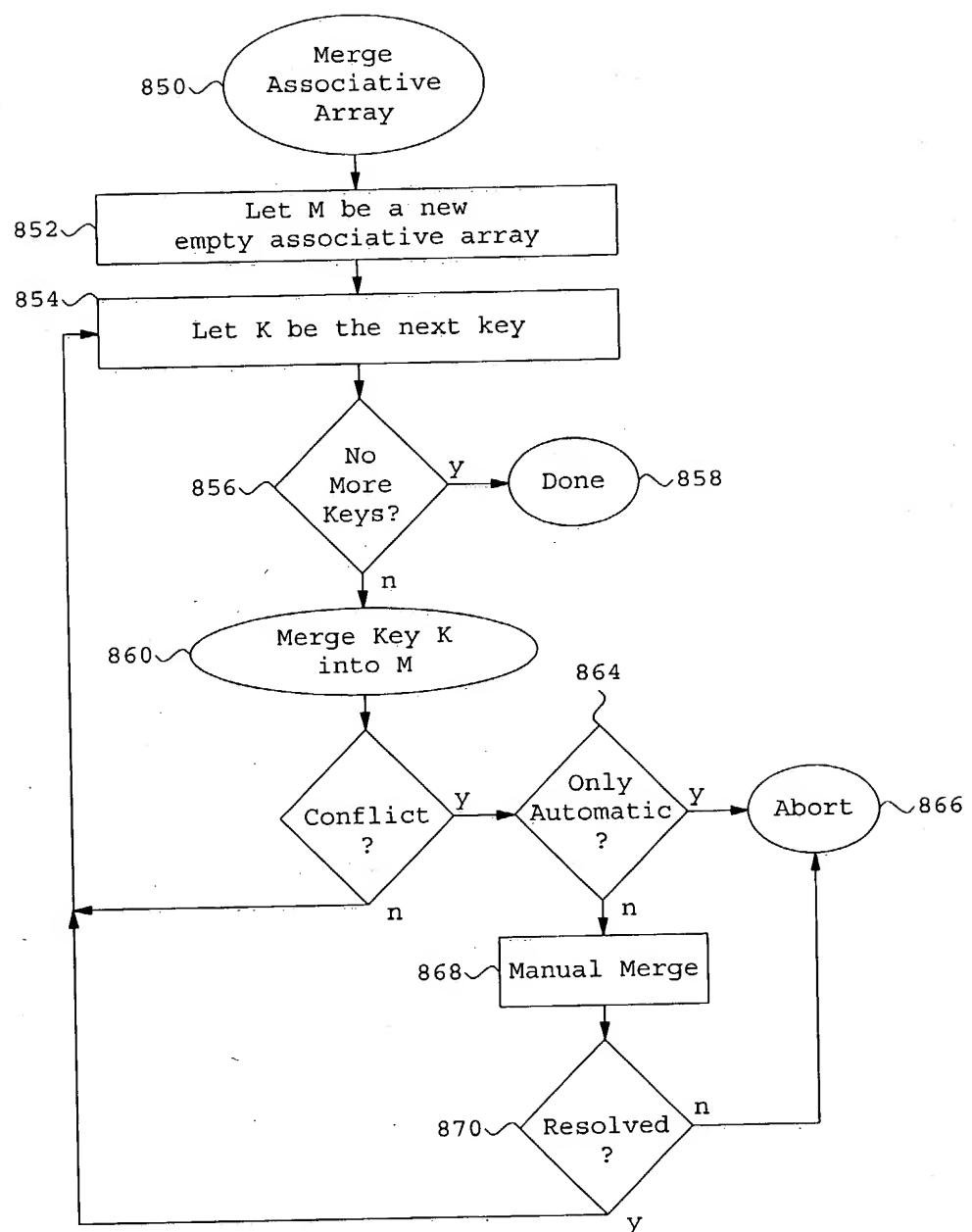


Fig. 8c

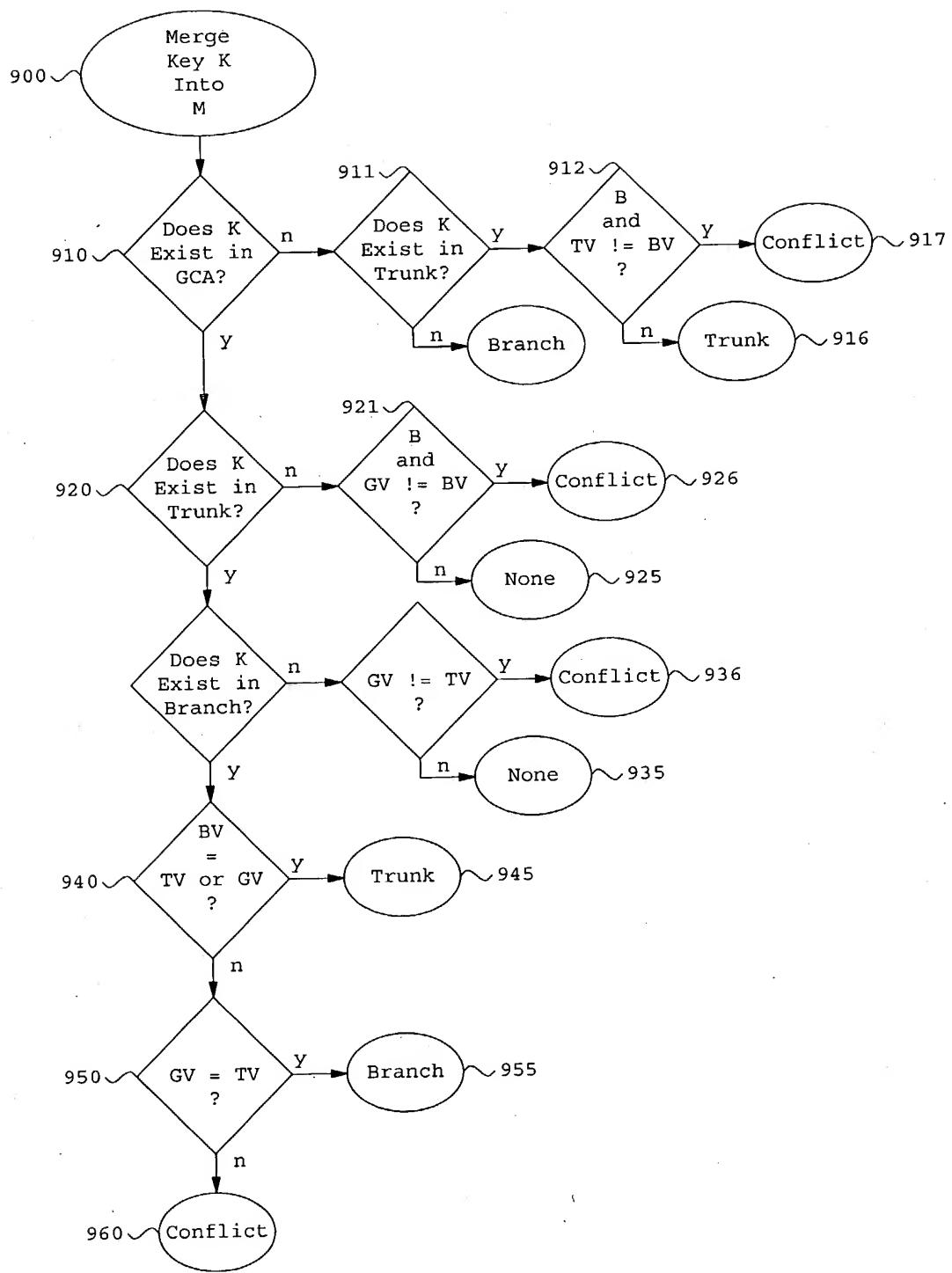


Fig. 8d

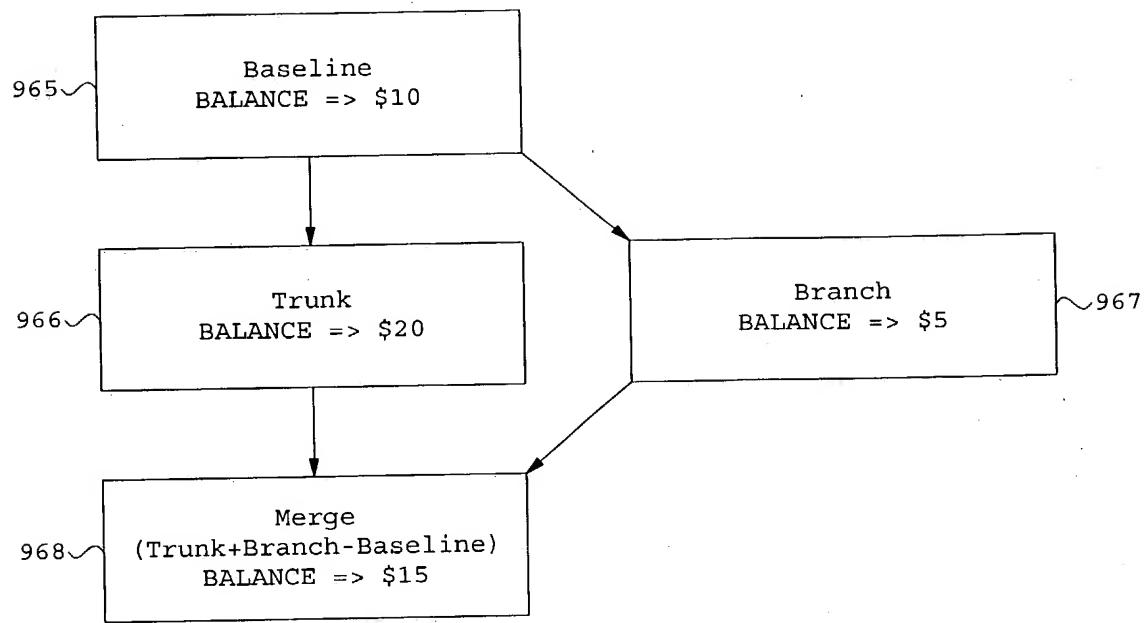


Fig. 8e

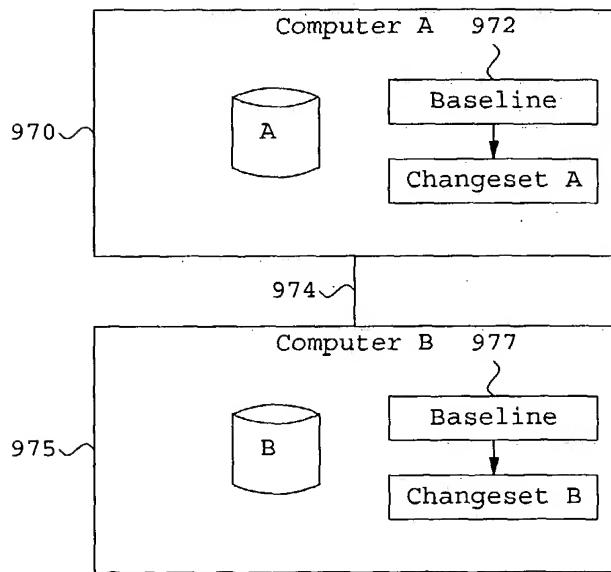


Fig. 9a

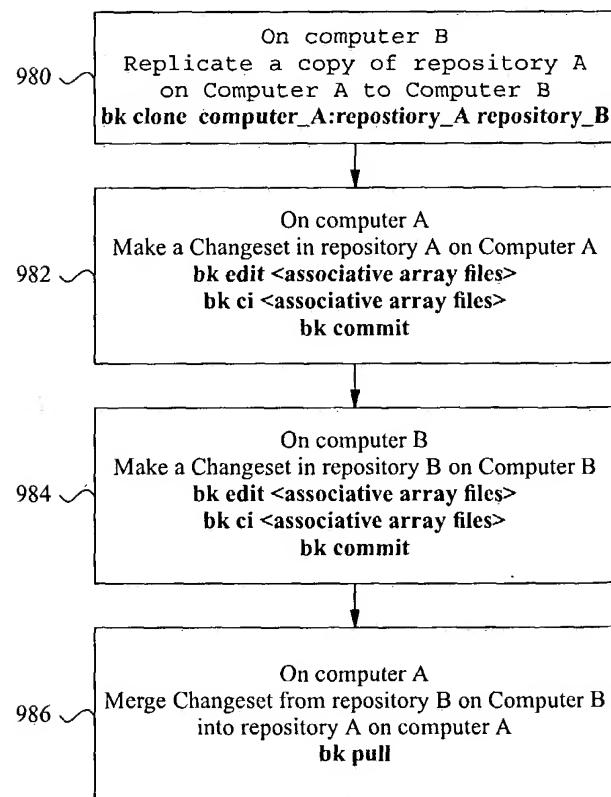


Fig. 9b